

Amendments to the Drawings:

Please replace the drawing sheets containing Figs. 1, 2(a) and 2(b) with the drawing sheeted attached to the Response. Figs. 1, 2(a) and 2(b) have been amended to include the legend "Prior Art".

REMARKS

I. Introduction

In response to the Office Action dated July 7, 2006, Applicant has amended claims 15-25 and 27 so as to provide antecedent basis support. Claims 29-31 are added. Support for these new claims can be found, for example, at page 10, lines 5-12 and page 11, lines 5-7 of the specification. No new matter has been added.

For the reasons set forth below, Applicant respectfully submits that all pending claims are patentable over the cited prior art references.

II. The Rejection Of Claims 14 and 16-20 Under 35 U.S.C. § 102

Claims 14 and 16-20 are rejected under 35 U.S.C. § 102(e) as being anticipated by US Pub No. 2003/0176005 to Takano. Applicant respectfully traverses this rejection for at least the following reasons.

Claim 14 recites in-part a method of fabricating an organic electronic device including patterning a lower electrode layer upon a substrate, depositing a precipitation agent upon the lower electrode layer, and depositing an organic material upon the precipitation agent, the organic material drying into an organic layer, the organic layer having a substantially flat and uniform profile.

In the statement of rejection, the Examiner has asserted that Takano discloses imparting liquid affinity and liquid repellence to the pixel electrode 511 (see, Fig. 13, "one-dot-chain lines"), and therefore teaches depositing a precipitation agent upon the pixel electrode 511, as recited in claim 14. The Examiner also has asserted that an organic material is then deposited onto the surface of the pixel electrode 511 that dries into an organic layer having a substantially flat profile. Applicant respectfully disagrees.

Takano describes a manufacturing process for manufacturing an organic electroluminescent (EL) device having organic EL elements. The process includes forming a bank portion 512 by depositing an inorganic bank layer 512a and an organic bank layer 512b on a circuit element portion 502 positioned on a substrate 501 and on pixel electrodes 511 (¶ 112

and 113, and Fig. 12). The bank portion 512 is formed with openings 512g. Before depositing the openings 512g with organic layers (e.g., a light emitting layer and a hole injection/transport layer), each bank portion and the electrode surface 511a of each pixel electrode are treated by three plasma treatment processes; namely, a preheating process, a liquid affinity-imparting process and a liquid repellence-imparting process (§ 116 and Fig. 14). In the liquid affinity-imparting process, O₂ plasma, which introduces hydroxylic groups to the electrode surface 511a of each pixel electrode 511 and the inorganic and organic bank layers 512a/512b, is performed (§ 118). Then, CF₄ plasma, which introduces fluorine groups and liquid repellence to upper openings 512d and upper surfaces 512f of the organic bank layer 512b, is performed (§ 119).

Takano fails to teach depositing a precipitation agent on the pixel electrode 511. None of the features of Takano which could conceivably be identified as an “electrode” can meet the limitations of claim 14. The liquid affinity and the liquid repellence processes disclosed in Takano cannot correspond to a precipitation process or a process that introduces precipitation agent. To assist the Examiner in understanding the term “precipitation”, Applicant has attached Exhibit A (retrieved from McGraw-Hill Encyclopedia of Science & Technology, 8th Edition published in 1997) and Exhibit B (retrieved from “Römpp Chemie Lexikon” by J. Falbe and M. Regitz published prior to 1997) for reference purposes.

As shown in Exhibit A, precipitation is a process of producing a separable solid phase within a liquid medium. In a broad sense, precipitation represents the formation of a new condensed phase. Referring to Exhibit B, this article states that “... to precipitate means a method of segregating a solved material as unsolvable particles regardless of an eventual change of the chemical composition by adding a suitable substance”

Applicant respectfully submits that the liquid affinity and the liquid repellence processes disclosed in Takano neither produce “a separable solid phase within a liquid medium” nor segregate “a solved material as unsolvable particles regardless of an eventual change of the chemical composition by adding a suitable substance”.

In contrast, by way of an example, the precipitation agent as disclosed in the specification can cause particles of an organic solution to become "heavy" or larger in size such that the gravitational effect upon the particles increases.

If the pending rejection is maintained, Applicant respectfully requests that the next Office Action provide further explanation as to how a precipitation agent is introduced in Takano so as to afford the Applicant an opportunity to further address this issue.

As anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and at a minimum, Takano fails to disclose or suggest the foregoing claim elements, Applicant respectfully submits that Takano does not anticipate claim 14. Claims 16-20 depend on claim 14, and are submitted to be allowable by virtue of their dependence on claim 14.

III. The Rejection Of Claims 14, 16-23 and 27 Under 35 U.S.C. § 102

Claims 14, 16-23 and 27 are rejected under 35 U.S.C. § 102(e) as being anticipated by US Pub No. 2004/0144975 to Seki. Applicant respectfully traverses this rejection for at least the following reasons.

Claim 14 recites in-part a method of fabricating an organic electronic device including patterning a lower electrode layer upon a substrate, depositing a precipitation agent upon the lower electrode layer, and depositing an organic material upon the precipitation agent, the organic material drying into an organic layer, the organic layer having a substantially flat and uniform profile.

In the statement of rejection, the Examiner has identified ¶ 0081-¶ 0085, ¶ 0103-¶ 0106 and ¶ 0142-¶ 0143 of Seki as disclosing the foregoing claimed features. Applicant respectfully disagrees.

Seki describes a composition that contains an organic material and at least one species of solvent (¶ 0081). The composition is prepared by mixing the organic conductive material with the solvent (¶ 0086), and used to form a hole injection/transport layer 6 on an anode 3 (¶ 0143

and Fig. 3). Acetylenic alcohol surfactants can be added to the solvent to enhance the dispersibility of the organic material in the solvent (§ 0104). Before discharging this mixture onto the anode 3 surrounded by the SiO₂ banks 4 and the organic partition banks 8, the surfaces of the anode 3 and the partition banks 8 are surface-treated by O₂ and CF₄ plasma process so that the anodes 3 and the SiO₂ banks 4 can have ink-affinity and ink-repellant properties (§ 0142).

However, Seki fails to disclose depositing a precipitation agent on the anode 3. None of the features of Seki which could conceivably be identified as an "electrode" has a precipitation agent deposited thereon. Similar to the argument presented above with respect to Takano, Applicant respectfully submits that the surface treatment step disclosed in Seki neither produce "a separable solid phase within a liquid medium" nor segregate "a solved material as unsolvable particles regardless of an eventual change of the chemical composition by adding a suitable substance".

If the pending rejection is maintained, Applicant respectfully requests that the next Office Action provide further explanation as to how a precipitation agent is introduced in Seki so as to afford the Applicant an opportunity to further address this issue.

As anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and at a minimum, Seki fails to disclose or suggest the foregoing claim elements, Applicant respectfully submits that Takano does not anticipate claim 14. Claims 16-23 and 27 depend on claim 14, and are submitted to be allowable by virtue of their dependence on claim 14.

With respect to new claim 30, this claim recites depositing a precipitation agent on a lower electrode layer. However, as discussed *supra*, neither Takano nor Seki teach a deposition of a precipitation agent. For reasons analogous to those presented with respect to claim 14, Applicant respectfully submits that new claim 30 is also allowable over the cited references.

IV. Conclusion

By responding in the foregoing remarks only to particular positions taken by the Examiner, the Applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, Applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.


For all of the reasons set forth above, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 06-1050 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Alex Chan
Reg. No. 52,713

Fish & Richardson P.C.
500 Arguello Street, Suite 500
Redwood City, California 94063
Telephone: (650) 839-5070
Facsimile: (650) 839-5071